

accuracy of +50 percent and -30 percent. In the case of the Glendale North OU, EPA met these requirements for its cost estimates.

55. VI. A. 7. - ITT stated that if EPA has assumed optional operation of the treatment systems (because the liquid-phase and vapor-phase carbon consumption rates appear to assume perfectly exclusive adsorption), costs could be higher than anticipated.

EPA Response: See EPA Responses to ITT Comments 53 and 54.

56. VI. A. 7. - ITT stated that assuming an operating time of 12 years is inadequate and that EPA should provide an explanation of why long-term costs were not addressed. ITT stated that this explanation should be provided regardless of the interim measure status and that the public should be provided an opportunity to comment after EPA conducts the requisite analyses.

EPA Response: Again, EPA is selecting an interim remedy that is size and time bound. There are no costs associated with the interim remedy after 12 years. It was determined during the FS that most of the contamination would be removed during the first 12 years of operation. Costs for the final remedy cannot be discussed at this time because final remedial actions are not being evaluated at this time.

57. VI. A. 8. - ITT stated that EPA should include the basis for its statement that the State of California is expected to support alternatives 6, 8 and 10. ITT also indicated that opportunities for public comment should be made available if the State raises further concerns about alternatives 2, 3 and 4.

EPA Response: As shown in several Administrative Record documents for the Glendale North OU, the State commented on the RI Report for the GSA, EPA's preliminary ARARs analysis, the FS for the Glendale North OU, and the Proposed Plan for the Glendale North OU. In addition to receiving these specific written comments, EPA conducted (and continues to conduct) quarterly management committee meetings with state and local officials to discuss the San Fernando Valley Superfund Project. In several letters and at the meetings, the State has continued to express its support for the Glendale groundwater cleanup. In addition, the proposed remedy for the Glendale North OU is similar to that of the Burbank OU which is currently in remedial design and the State concurred upon and supported that interim remedy. For all of these reasons, documented in the Administrative Record for the Glendale North OU, the EPA felt comfortable stating that the State was expected to support the alternatives presented in the FS.

58. VI. A. 9. - ITT stated that EPA should include the basis for its statement that community acceptance is anticipated for certain alternatives (for example, EPA's plan to blend treated water to

reduce nitrate concentrations). ITT also stated that EPA also fails to open the door for future analysis and future public comment if the anticipated concerns are raised with respect to the alternatives. ITT stated that if future concerns are raised with respect to the alternatives, opportunities for public involvement should be made available.

EPA Response: EPA expects that the community will support the alternatives, with the exception of Alternative 1 - No Action, because each involves the cleanup of groundwater contamination thus protecting human health and the environment. In addition, between 1989 and 1991, EPA held quarterly meetings with a community work group (CWG). The CWG was composed of community members and state and local officials. The CWG expressed its support for the proposed Glendale groundwater cleanup project very early in RI/FS process. Minutes from some of the CWG meetings are included in the Administrative Record for the Glendale North OU. Finally, the public was given sixty days to comment on the RI, FS and Proposed Plan as well as all of the other Administrative Record documents. These comments largely supported EPA's preferred alternative. Please review Part 1 of this Responsiveness Summary.

59. VI. A. 9. - ITT stated that additional public concerns should have been addressed including: siting of extraction and treatment facilities and associated rights-of-way; air emission controls, noise, and aesthetics of the facilities; and the planned distribution of the treated groundwater to the water purveyors for use by the community.

EPA Response: EPA has actively solicited comment from the community on the Glendale North OU Proposed Plan by conducting a public meeting and by distributing the Proposed Plan in the community. During the public comment period, the public was encouraged to provide comments to EPA on the proposed extraction and treatment facilities as well as other factors associated with Glendale North OU and presented in the documents of the Administrative Record. The purpose of this Responsiveness Summary is to address the concerns and questions the public has regarding the Proposed Plan. In addition, once the engineering design is complete, EPA will issue a fact sheet and provide, if appropriate, a public meeting before the remedial action is commenced.

60. VI. B. - ITT stated that the comparative analysis of each alternative with respect to each criterion is inadequate because of the lack of detail in other analyses. For example, EPA should have explained the reasons for dismissing peroxide oxidation as a method for treating the groundwater so the commenting public would be able to evaluate EPA's decision not to use it. In addition, EPA's explanation at the July 23, 1992 public meeting was inadequate.

EPA Response: The level of detail in the comparative analysis is appropriate for the limited scope of the interim remedial action

for the reasons discussed in the Responses to ITT Comments 39 and 50. EPA's reasons for not selecting perozone oxidation as a method of treating the groundwater are discussed in this Responsiveness Summary under the comments from the City of Glendale.

VII. Meaningful Comment on the EPA Documents

61. VII. - ITT stated that it has been greatly limited in its ability to comment on EPA documents, specifically the RI for the Glendale Study Area (January 1992), the Glendale North Plume OU FS (April 1992), and the Proposed Plan for the Glendale North OU (July 1992), because: 1) the FS and the Proposed Plan were not made available until July 1992, and 2) the EPA documents do not include relevant technical information. At most, the EPA documents reference other technical documents but do not provide sufficient information about these documents to support conclusions.

EPA Response: EPA is only required to hold a 30-day public comment period on its proposed plans and the supporting documentation provided in the Administrative Record. However, upon request of ITT, EPA extended the public comment period an additional 30 days through September 8, 1992. In addition, the "EPA documents" represent only a small portion of the Administrative Record for the Glendale North OU. In order to review and evaluate all of the data that support the Glendale North OU remedy, ITT must also review the Administrative Record which was available throughout the public comment period and continues to be available at the five San Fernando Valley information repositories (See Appendix A).

62. VII. - ITT stated that meaningful comment on the EPA documents for the Glendale Study Area is impeded by EPA's failure to provide adequate information. ITT contends that administrative law procedures concerning the development of an adequate record for review have not been satisfied because EPA documents do not include relevant technical information by which the validity of EPA's conclusions can be evaluated. ITT stated that references to other technical documents are made but sufficient information about these documents to support EPA's conclusions is not included in the RI/FS and Proposed Plan. ITT suggests that more chemical and water level data and more general chemistry data for groundwater and treatability information should have been included.

EPA Response: Based on this comment, it appears that ITT failed to consider and review other documents in the Administrative Record. The "EPA documents" referred to by ITT include the RI for the GSA, the Glendale North FS report and the Proposed Plan for the Glendale North OU. However, these three documents represent only a small portion of the Administrative Record developed to document EPA decisions regarding EPA's preferred alternative for the Glendale North OU interim remedy. The Administrative Record has been and continues to be available for review at the five San Fernando Valley Superfund project information repositories (See Appendix A).

The documents presented in the Administrative Record contain data sufficient to support EPA decisions regarding the Glendale North OU interim remedy.

63. VII. - ITT stated that the EPA Documents fail to comply with the NCP because ARARs and TBCs are not specifically identified and that interested parties are deprived of a "reasonable opportunity" to comment on ARARs and TBCs that the various alternatives will be required to meet.

EPA Response: EPA disagrees with this comment. In the RI report for the Glendale Study Area and FS report for the Glendale North OU, EPA identified potential ARARs and TBCs for the Glendale North OU. Final determination of ARARs and TBCs is made in the ROD for the selected remedy. In addition, several documents in the Administrative Record for the Glendale North OU Proposed Plan further identify ARARs for the Glendale North OU. For example, see Administrative Record documents 266 and 267. These two documents are EPA responses to State comments on the Glendale North OU Proposed Plan and include ARARs determinations. Again, the "EPA Documents" represent only a small portion of the Administrative Record developed to document EPA decisions regarding EPA's preferred alternative for the Glendale North OU interim remedy. Therefore, the entire Administrative Record must be reviewed to see the complete record on EPA's ARARs determinations and other information pertinent to the RI, FS, and EPA's preferred alternative selection. Also see EPA Response to ITT Comment 31.

VIII. Other Issues

64. VIII. A. - ITT stated that the FS is based on the false assumption that DNAPL residuals are not an issue for the North Plume OU and that EPA does not address the potential effects their presence in the saturated zone may have on the cost and cleanup time estimates and effectiveness of any cleanup.

EPA Response: Since the interim action is size and time bound, the possible existence of DNAPL residuals will not have an impact on the cost and cleanup time for the interim action. Also see EPA Responses to ITT Comments 39, 44, 46, and 70.

65. VIII. A. - ITT stated that the difficulty in reaching traditional action levels in aquifers containing DNAPL residual should be acknowledged and should enter into the interim remedial planning process. Additionally, groundwater management strategies such as managing the VOC mass removal to the asymptote (or point of diminishing returns), and subsequent groundwater treatment at point of use should have been addressed.

EPA Response: EPA disagrees with this comment. EPA refers ITT to an EPA guidance document entitled: Considerations in Groundwater Remediation at Superfund Sites (USEPA OSWER Directive October 18,

1989). This guidance, which was referenced in the Administrative Record for the Glendale North OU, emphasizes the necessity and appropriateness of performing interim actions regardless of the presence of DNAPL. A second EPA guidance document to support this position is: Superfund Records of Decision Update, Evaluation of the Effectiveness of Groundwater Extraction Systems (USEPA 1990). This guidance, "encourages consideration of early actions to prevent further migration of contaminants if these measures prevent the situation from getting worse, initiate risk reduction, and/or provide useful information to design the final remedy." The Glendale North OU interim remedy meets each of these objectives. Again, EPA's selected remedy is an interim with specific interim cleanup objectives which do not include or necessitate consideration of DNAPL cleanup. It is not a final remedy.

66. VIII. B. - ITT stated that the FS does not consider whether priority pollutants (arsenic, radon, and nitrate) are naturally occurring or background substances present as a result of pre-industrial activities on the site. If the sources are pre-industrial or non-industrial, the costs for treating these substances should not be considered CERCLA "response costs". Additionally, ITT stated that if EPA decides to address these substances in the remedy, the costs associated with their removal from the groundwater should not be passed to PRPs as CERCLA "recoverable costs".

EPA Response: The nature and extent of metals and radionuclides and how they might effect the Glendale North OU interim cleanup are further described in Administrative Record documents 0263, 0265 and 0268. Radon and other radionuclides are also discussed in a technical memorandum entitled: San Fernando Valley Superfund Site, Radionuclides in the Glendale Study Area (March 2, 1993), included in Supplement 1 of the Administrative Record for the Glendale North OU. These documents indicate that EPA believes that many of the metals detected in initial sampling of the groundwater of the north plume portion of the GSA are sampling artifacts and will not impact the Glendale North OU remedy. All radionuclides have been found to be in compliance with current MCLs. Radon has been detected above its proposed MCL and potential impacts to worker health and safety with respect to air stripping tower carbon replacement will be considered and addressed during remedial design. Finally, with respect to nitrate and hazardous substances found in the groundwater of the Glendale North OU area, whether or not a particular contaminant is naturally-occurring is not relevant since under the selected remedy the treated water must meet all MCLs, including the nitrate MCL, in order to distribute the treated water to a public water supply system. The costs associated with this interim remedy are necessary costs of response and are to be incurred consistent with the NCP. The issue of the liability of potentially responsible parties for the costs of the remedy will not be addressed in this Responsiveness Summary because it is not relevant to the selection of the remedy.

67. VIII. C. - ITT stated that EPA used only one potential site location when costing the treatment facility when the various cost impacts for each site should have been compared in selecting the optimal extraction scenario. In addition, ITT stated that EPA should have discussed the feasibility of using these sites based on factors such as access, rights-of way, available space, etc.

EPA Response: As discussed in the response to ITT Comment 51, it is consistent with the NCP and EPA policy for EPA to limit the number of alternatives for consideration of the interim action in light of the need to quickly and effectively minimize migration of the contamination.

68. VIII. D. - ITT stated that the FS fails to identify or discuss new and innovative technology for the alternatives that may be more effective as the preferred alternative and/or less costly. ITT contends that EPA should have considered in situ pumping systems or air stripping such as the vacuum vaporizer well UVB process developed in Germany.

EPA Response: EPA disagrees with this comment for the reasons discussed in the response to ITT Comment 51.

IX Conclusions

69. IX. - ITT's concluding comments claim that a valid basis for selecting an alternative is not presented in the EPA Documents and other similar comments.

EPA Response: All comments presented by ITT in its conclusion section are redundant and are addressed specifically in the comments above.

The following comments were submitted by ITT on the Feasibility Study for the Glendale Study Area North Plume Operable Unit:

70. (FS Page 1-1 & 11-1) ITT asserts the following: the estimates of VOC mass in the subsurface are based solely on contribution from the dissolved portion of VOCs in the aqueous phase. Given the potential for DNAPL in the area, this assumption is inaccurate. While DNAPL estimation techniques currently are qualitative at best, the issue should at least be acknowledged in the text. Presenting the mass estimates as is, is misleading and inaccurate.

EPA Response: EPA disagrees. The mass estimates presented in the Glendale OU FS are not intended to provide an estimate of the total mass in the subsurface, but to provide an approximation of the VOC mass already dissolved in the groundwater and sorbed to the soil matrix on a regional scale. VOC mass may be present near source areas in the form of DNAPL. However, the primary objectives of the Glendale North OU are to inhibit the further migration of contamination that has already impacted groundwater and to begin to

remove contaminant mass from the north plume portion of the GSA to the extent practicable. It is an interim remedy and not a final remedy. This FS considered remedial alternatives that would address the entire areal extent of groundwater contamination within the north plume portion of the GSA. It is assumed that source control measures at individual facilities (such as those under the RWQCB's well investigation program) would be undertaken in conjunction with the area-wide remedial action. DNAPL may be found in the vicinity of these sites and would be addressed as part of these source control measures. Source control is beyond the scope of the Glendale North OU.

71. (FS Page 1-4) The purpose of the RI is outlined in Section 1.2. Specific technical objectives were to "interpret the geology and groundwater movement; determine the nature, magnitude, and lateral and vertical extent of contamination, present factors influencing the fate and transport of contaminants in the study area environment." However, as explained throughout these specific technical comments and the general comments, the data collected to accomplish these objectives were not sufficient to support an informed risk management decision regarding the remedies proposed in the FS.

EPA Response: EPA disagrees. An informed risk management decision regarding the area-wide groundwater contamination was made on the basis of an area-wide interpretation of the geology, hydrogeology, and hydrology; the nature and extent of contamination; and the factors affecting the fate and transport of contaminants in the soil-water matrix. Although this interpretation may not be sufficient to address source control issues, it is sufficient for evaluating remedial alternatives for an interim remedial action such as the Glendale North OU. In addition, as stated previously, the Glendale North OU remedy is an interim remedy. Interim Action Records of Decision (RODs) do not require a completed baseline risk assessment although enough information must be available to demonstrate the potential for risk and justify taking an action (Superfund Records of Decision Update: Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, USEPA Publication 9200.5-2161, July 1991). However, EPA proceeded to complete a baseline risk assessment for the Glendale North OU interim remedy even though one is not required in order to take an action. Immediate action is required for the Glendale North OU area because groundwater contamination left unaddressed in the short-term not only contributes to immediate risk but is likely to contribute to increased site risk and further degradation of the environment.

72. (FS Page 1-6) Transmissivity and hydraulic conductivity values are given, but there is no clear indication as to which aquifer zones are included in the evaluation, which is necessary to evaluate the effectiveness of the modeling effort.